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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,858	10/22/2003	Alain Yang	244075US0	3332

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ALEXANDRIA, VA 22314

EXAMINER

YAO, SAMCHUAN CUA

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/689,858

Applicant(s)

YANG ET AL.

Examiner

Sam Chuan C. Yao

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 and 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-15, 17 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/24/4, 5/3/5, 5/31/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group II, species A in the reply filed on 09-01-05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Note: while Counsel indicated that, claims 10-18 are readable on elected species A (glass), claim 16 (polymer) does not appear to be readable on the elected species. Under an accepted understanding and meaning of polymer and glass, it is quite clear that a glass can't reasonably be considered as a polymer, and vice versa. For these reasons, claim 16 along with claims 1-9 are withdrawn from consideration.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10,12-15 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art (APA) in view of Herzberg (US 5,620,541), Kennedy et al (US 5,308,692), and Tao et al (US 4,437,917).

With respect to claims 10 and 12-15, The APA discloses a conventional insulating fibrous mat comprising textile fibers or rotary or flame attenuated fibers. Accordingly, the textile fibers "... are typically chopped segments 2 to 15

*cm long and have diameters of greater 5 [microns] up to 16 [microns]*, while the *“[r]otary fibers and flame attenuated fibers are relatively short, with lengths on the order of 1 to 5 cm, and relatively fine, with diameters of 2 [microns] to 5 [microns]. Mats made from textile fibers tend to be stronger and less dusty than those made from rotary fibers or flame attenuated fibers, but are somewhat inferior in insulating properties. Mats made from rotary or flame attenuated fibers tend to have better thermal and acoustic insulating properties than those made from textile fibers, but are inferior in strength.”* (emphasis added; specification; page 1 to page 2 full paragraph).

The APA does not teach combining textile fibers and rotary or flame attenuated fibers in forming a fibrous mat. However, it would have been obvious in the art to modify an insulating fibrous mat of the APA by combining the textile fibers and rotary or flame attenuated fibers together, because: a) Herzberg, drawn to making a non-woven insulating batt, suggests combining fine fibers and structural (large) fibers *“to obtain desired thermal and mechanical properties as well as excellent hand of the stabilized batt”*, wherein the fine fibers *“provide improved thermal resistance, drape, softness and hand ...”*, and structural fibers *“provide the batt with greater strength, cushioning and resilience”* (abstract; col. 3 lines 31-48); and, b) it is old in the art to form a fibrous insulating batt comprising a 1<sup>st</sup> fibrous material having a diameter range of 2-6 microns and a 2<sup>nd</sup> fibrous material having a diameter range of 10-20 microns, and preferably about 15

micron as exemplified in the teachings of Kennedy et al (abstract; col. 1 lines 11-17; col. 4 lines 7-50).

The APA and Herzberg do not suggest adding an antistatic agent such as a water to at least one of textile fibers and rotary or flame attenuated fibers and passing them through a sheet former to form a web. However, such would have been obvious in the art, because Jaskowski, drawn to making a fibrous insulating batt, teaches spraying glass and/or organic fibers with an anti-static agent such as a water during a fiber web forming operation to "*neutralize the effects of static electricity*" on the fibers (abstract; col. 8 lines 4-18).

With respect to claims 17-18, since it is a notoriously common practice in the art to add a resin binder to a fiber mass on a collection means and to heat-cure the resin binder to enhance the structural integrity of a finished web, claim 17 would have been obvious in the art. Moreover, it is well known in the art to apply an aqueous based resin binder to a fibrous web and to heat-cure the resin binder. It directly follows that, since there is water in the resin binder, the water is reasonably expected to function as an antistatic agent. In any event, an anti-static agent comprising a binder is well known in the art. For these reasons, claim 18 would have been obvious in the art.

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references set forth in numbered paragraph 3 as applied to claim 10 above, and further in view of Tao et al (US 4,437,917).

Art Unit: 1733

Since Tao et al discloses subjecting an air-laid fibrous mat on a forming wire to a constant humidity condition at a relative humidity of at least 70% to eliminate electrostatic charges to the web (col. 1 line 41 to col. 2 line 2; col. 3 line 47 to col. 4 line 12), it would have been obvious in the art to subject a fibrous mat on a sheet former in a modified process of the APA at a relative humidity of at least 70%.


**Conclusion**

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sam Chuan C. Yao  
Primary Examiner  
Art Unit 1733

Scy  
09-13-05